



# **National Center for Home Food Processing and Preservation**

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Project Director**

**Professor and Extension Food Safety Specialist  
The University of Georgia  
Department of Foods and Nutrition  
College of Family and Consumer Sciences**



# National Center for Home Food Processing and Preservation

## *The University of Georgia – Lead Institution*

Department of Foods and Nutrition

Department of Food Science and Technology

Department of Housing and Consumer Economics

## *Alabama A&M University – 4-yr Partner*

Department of Food and Animal Sciences

## *University of California-Davis – 2-yr Partner*

Department of Food Sciences and Technology

## *University of Puerto Rico-Mayagüez*

Department of Food Science and Technology



# University of Georgia Team

## ► Foods and Nutrition

- Dr. Elizabeth Andress, Principal Investigator
- Dr. Judy Harrison, Co-PI
- Dr. Elaine D'sa, Research Coordinator
- Dr. Brian Nummer, Project Coordinator
- Web Site Administrator (now Jimmy Hansen)

## ► Food Science & Technology

- Dr. Mark Harrison, Co-PI
- Dr. William Kerr, Co-PI
- Sun-Gil Choi, Lab Technician

## ► Housing and Consumer Economics

- Dr. Anne Sweaney, Team Member



# Advisory Committee

*Composed of individuals from*

**Auburn University**

**Clemson University**

**Colorado State University**

**Cornell University**

**Kansas State University**

**North Carolina State University**

**University of California-Davis**

**Washington State University**

**Alltrista Consumer Products Company**

**National Presto Industries, Inc.**



# Goals

- ▶ **The National Center (originally to be 2 years) was initially established**
  - to update USDA-CSREES canning and freezing guidelines and the database supporting such guidelines;
  - to specifically add recommendations that emphasize the use of nontraditional fruits and vegetables (e.g., tropicals) and popular consumer specialty foods such as salsas, relishes, sauces and chutneys;
  - identify future research needs;
  - finalize a USDA *Complete Guide to Home Freezing* and
  - update guidelines in the USDA *Complete Guide to Home Canning*.



## Goals, continued

- In Year 2 (which then became the start of a new 4-year project), the goals were broadened to include
  - researching and updating other methods of home food preservation, and
  - developing multiple dissemination methods for existing and new recommendations.



# Activities

- **Critical literature reviews and analyses;**
- **Original applied research;**
- **Updating of existing USDA and Extension consumer publications; and**
- **Establishing additional distribution channels for dissemination of guidelines, including**
  - **A new website:**  
**[www.homefoodpreservation.com](http://www.homefoodpreservation.com)**
- **Other activities included an instructional video series, an original online self-study on home food preservation and a model volunteer-based Master Food Preserver Program.**



# Applied Research

- **Microbial profiles of selected fresh herbs and whole spices used in home preparation of flavored vinegars, salsas, oils.**
  - Supports the use of a chlorine wash to reduce loads prior to flavoring vinegars.
  
- **Effect of pressure canner size on heat penetration in stewed tomatoes.**
  - For all sizes, most of the cumulative lethality was acquired during cooling. The goal was not reached during the process time.
  - Jars processed in smaller retorts (6 and 8 quart) had smaller  $f(h)$  values indicating a faster rate of heating during the process time than occurred in the 17 quart retort.







# Applied Research, cont.

- Documenting effect of fill weight on heat penetration in a pickled product (boiling water canning).



- Studies on low-fat home-processed Italian sausage with oatmeal substitute.





# Canning with Splenda®

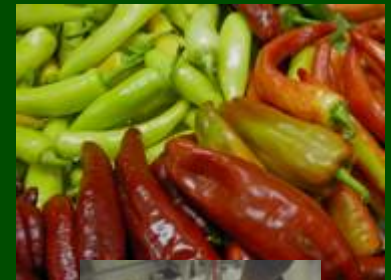
Georgia 'Ruston Red' peaches





# Other Applied Research Work

- Survival of *Listeria monocytogenes* in refrigerator dill pickles.
- Microwave blanching of vegetables.
- Continued development of “specialty” foods – salsas, sugar concentrates, relishes, sauces and marinades.
- Looking at sugar substitution for sweet pickles and spreads.
- Issues of home pressure canner accuracy.
- Survival and outgrowth of *C. botulinum* in garlic/oil products.





# NCHP Product Development

## ► Salsas

- [http://www.uga.edu/nchfp/how/can\\_salsa.html](http://www.uga.edu/nchfp/how/can_salsa.html)
- Jicama
- Mango
- Peach Apple
- Cranberry
- Collected preliminary data on, and will be continuing research under a new grant:
  - Formula basis for tomato-peppers-onion



# NCHP Product Development

## ► Pickled Products

- Bread and butter jicama
- Cantaloupe
- Asparagus
- Baby carrots and pearl onions
- Yellow pepper rings
- Jalapeno rings
- Tomatillo relish
- Chayote and pear relish
- Chayote and jicama slaw



- ## ► Splenda®: sweet pickle slices, cantaloupe, pickled beets



# NCHP Product Development

## ► Other Specialties

- Mango chutney
- Mango sauce, mango leather
- Golden pepper jelly
- Easy hot sauce
- Cayenne pepper sauce
- Lemon curd!





# Surveys

- **Survey of State and County Extension Faculty**
  - Email in March 2000.
  
- **National Telephone Survey, 2000-2001**
  - To determine activity in home canning and freezing, and use of critical safety practices.
  - 500 complete telephone interviews from households randomly selected across the U.S.
  
- **National Telephone Survey, 2005**
  - To determine activity in home canning, freezing and drying.
  - 800 complete telephone interviews from households randomly selected across the U.S. (Still being analyzed.)

**VERY HIGH RATE OF RISKY PRACTICES  
BEING USED TO CAN LOW ACID FOODS**





# National Center for Home Food Preservation



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## About Us

The National Center for Home Food Preservation is your source for current research-based recommendations for most methods of home food preservation. The Center was established with funding from the Cooperative State Research, Education and Extension Service, U.S. Department of Agriculture (CSREES-USDA) to address food safety concerns for those who practice and teach home food preservation and processing methods. [more >>>](#)

## Publications

Your place to find current research-based recommendations from the USDA, NCHFP, The University of Georgia Cooperative Extension Service, and other land-grant universities in the Cooperative Extension System.

## So Easy To Preserve

The University of Georgia Cooperative Extension is pleased to offer a new So Easy to Preserve video series. Eight shows (20 to 35 minutes each) contain the most up-to-date recommendations for preserving fresh foods and great taste in your home. Features include home canning of tomatoes, vegetables and fruits; freezing fruits and vegetables; drying fruits and vegetables; pickling; making jams and jellies; and, a show devoted to the canned specialties of hot chile salsa, mango chutney and spicy jicama relish.



Announcing a free, self-paced, online course for those wanting to learn more about home canning and preservation.

- Introduction to Food Preservation
- General Canning

## What's New

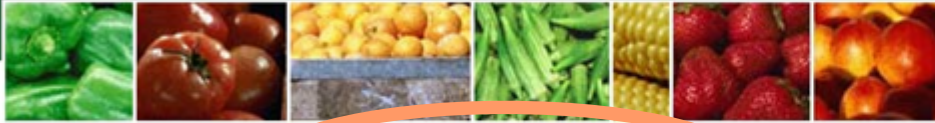
Added Causes and Possible Solutions for [Canned Foods](#), [Canned Fruit Juices](#), [Pickled Foods](#), [Fermented Pickles](#).







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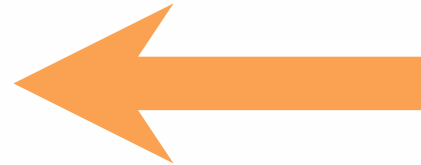
## NCHFP Publications

### Factsheets

[Botulism: It Only Takes A Taste](#)  
[Canning Chocolate Sauces Unsafe](#)  
[Fermented Foods: Kefir](#)  
[Fermenting Yogurt at Home](#)  
[Historical Origins of Food Preservation](#)  
[Home Preservation of Pecans](#) [HTML](#)  
[Preparing and Preserving Lemon Curd](#) [HTML](#)  
[Resources for Home Food Freezing](#)  
[Resources for Starting Your Own Preserved Foods Business](#)  
[The Mango - A Tropical Treat](#) [HTML](#)  
[Using and Preserving Chayote](#) [HTML](#)  
[Using and Preserving Cranberries](#) [HTML](#)  
[Using and Preserving Jicama](#) [HTML](#)

### Home Canning Processes

- [Bread and Butter Pickled Jicama](#) [HTML](#)
- [Cantaloupe Pickles](#) [HTML](#)
- [Easy Hot Sauce](#) [HTML](#)
- [Chayote and Jicama Slaw](#) [HTML](#)
- [Chayote and Pear Relish](#) [HTML](#)
- [Cranberry Orange Chutney](#) [HTML](#)
- [Cayenne Pepper Sauce](#) [HTML](#)
- [Golden Pepper Jelly](#) [HTML](#)
- [Lemon Curd, Canned](#) [HTML](#)





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## Presentations / Papers

All Abstracts for presentations are presented in PDF format. Presentations are currently provided in PowerPoint and HTML format (those that are not in html format currently are in the process of being converted).

These papers represent research or other information presented in a scientific or association professional meeting format. They do not by themselves represent USDA or NCHFP recommendations for consumer food preservation at home. In many cases, they represent research in process. For our recommendations on how to preserve food at home, please see our other publications, or the *How Do I....* sections of this Web site.

### 2004

Title	Abstract	Presentation
Assessment of microwave blanching as a preparatory tool for home freezing of yellow squash	<a href="#">PDF</a>	<a href="#">PPT</a> <a href="#">HTML</a>
Influence of product-entrapped air and venting on lethal effect in model domestic pressure canner studies	<a href="#">PDF</a>	<a href="#">PPT</a> <a href="#">HTML</a>
<i>Listeria monocytogenes</i> survival in refrigerator dill pickles	<a href="#">PDF</a>	<a href="#">PPT</a> <a href="#">HTML</a>
Properties of home processed Italian sausage prepared with oatmeal	<a href="#">PDF</a>	<a href="#">PPT</a> <a href="#">HTML</a>
Studies on safe acidification of salsa for home boiling water canning	<a href="#">PDF</a>	<a href="#">PPT</a> <a href="#">HTML</a>
Thermal process development of a home-canned salsa-type product	<a href="#">PDF</a>	<a href="#">PPT</a> <a href="#">HTML</a>
Effects of preparation methods on the microbiological safety of home-dried jerky meat.	<a href="#">Journal</a>	<a href="#">Request a reprint</a>



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Announcing a self-paced online course for those wanting to learn more about home canning and preservation.

- Introduction to Food Preservation



# Self Study

The screenshot shows a web browser window displaying the WebCT at UGA interface. The browser's address bar shows the URL <http://webct.uga.edu>. The page title is "Preserving Food at Home: A Self-Study". The left sidebar contains a "Control Panel" with links like "View Designer Map", "Add Page or Tool", and "Manage Files". Below this is a "Course Menu" with links for "Homepage", "Course Objectives", "Course Instructions", "Course Content", "Introduction", "Canning", "Communication", "Calendar", "Discussions", "Chat", "Student Tools", "My Grades", and "My Progress". The main content area has a "Welcome to..." banner with the course title and a description: "Brought to you by the National Center for Home Food Preservation hosted by the College of Family and Consumer Sciences at the University of Georgia." Below the banner are three images: carrots, strawberries, and tomatoes, each with a link below it: "Course Objectives", "Course Instructions", and "Course Content". At the bottom, there is a contact information section for Jimmy Hansen at [nchfp@uga.edu](mailto:nchfp@uga.edu) and a "CREDITS" section with an "Author:" label.

WebCT at UGA

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Home: View Designer Options

**Preserving Food at Home: A Self-Study**  
Home


Welcome to...

*Preserving Food At Home: A Self Study*

Brought to you by the National Center for Home Food Preservation hosted by the College of Family and Consumer Sciences at the University of Georgia.

 [Course Objectives](#)

 [Course Instructions](#)

 [Course Content](#)

If you have problems navigating this course or accessing the content, please contact Jimmy Hansen @ [nchfp@uga.edu](mailto:nchfp@uga.edu)

CREDITS

Author:





Videos Are Out!





# ***So Easy to Preserve Videos***

- **Eight shows sold on DVD (one package)**
  - **Canning Fruits**
  - **Canning Tomatoes and Tomato Sauce**
  - **Canning Vegetables**
  - **Canned Specialties** (tomato chile salsa, jicama relish and mango chutney)
  - **Drying Fruits and Vegetables**
  - **Pickling** (bread & butter, quick whole dills, corn relish)
  - **Freezing Fruits and Vegetables**
  - **Jams and Jellies**



## ***Still Finishing Up***

- ***Complete Guide to Home Canning*** just done.
- ***Complete Guide to Home Freezing*** still in layout.
- **Model Master Food Preserver** curriculum still in editing.
- **Journal articles** still being written.
- **Still awaiting final consumer advice** from collaborators.



# Disclaimer

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